LRFD Bridge Design Manual Update ~ July 2012

18 June 2012

General and minor editing changes

Miscellaneous editorial corrections have been made but no general editing changes.

Policy and significant editing changes

Article	LRFD
2.5 & 2.5.1	Revised ADA references to Office of Design's Design Manual.
3.2.1	Revised bridge design number guidelines.
3.2.2.5	Clarified low grade overflow.
3.2.3.1	Specified a minimum 14.5-foot vertical clearance within the horizontal clear zone.
3.2.4.1.3	Revised pier clearance to 25 feet and referred to AREMA guidelines for heavy construction.
3.2.4.2.3	Revised pier clearance to 25 feet and referred to AREMA guidelines for heavy construction.
3.2.5	Separated pedestrian structure guidelines from highway structure guidelines, revised parapet guidelines, and added precast culvert underpass guidelines.
3.2.6.2.2	Revised Design Manual references.
C3.2.7.3.3	Revised slope protection location for BSLT Surfaces Figure. (This is not identified by color.)
3.2.7.4	Revised clear zone guidelines.
3.2.9 & C3.2.9	Added sheet layout guidelines to the commentary (These are not identified by color as changes.) and referred to guidelines in manual.
5.4.2.1.1	Removed HS-25 design of substructures and noted need to check deck reinforcement at piers.
5.4.2.4.1.1	Noted that the simple span condition is assumed for all strength and service checks except deflection and substructure loads, in which case continuity is assumed.
5.4.2.4.1.7 & C5.4.2.4.1.7	Gave guidelines for selecting deck reinforcement above piers.
5.5.2.4.1.8	Clarified spacing rules for shear studs.
5.6.2.1.1	Removed reference to HS-25 pile design for J-standards during transition to LRFD.
5.7	Made changes throughout to: (1) distinguish between typical and non-typical bearings, (2) permit rather than require design of typical bearings for service loads only, (3) require service, strength, and extreme event design of disc, pot, and other non-typical bearings, (4) resolve conflict with Iowa DOT SS 2434.02, A, 1, and (5) require 2012 AASHTO LRFD checking of seismic connection load paths.

6.2.6.1, C6.2.6.1	Prohibited welding of reinforcing bars to H-piles, but permitted welding of ASTM A709 bars where tension pile anchorage is required.
6.4.4.2	Increased Class 22 rock excavation width to 3 feet, and revised notch depth to 1 foot for both soft and hard rock.
6.6.1.1.1 & C6.6.1.1.1	Noted that the designer has the choice of constant depth (preferred) or tapered cantilevers for frame piers, and gave reasons.
6.6.4.1.1.1	Added the General Procedure (Method 2) as the preferred sectional design method. Clarified longitudinal reinforcement for shear. Noted that single hoop stirrups may be used at 12 inches above T-pier columns. Noted that torsion need not be checked for typical pier caps.
6.6.2.6	Revised vehicular collision load for piers near highways and railways based on changes to the 2012 AASHTO LRFD Specifications and office modifications.
6.6.4.1.4 & 6.6.4.1.4.1	Added provision for a clearance of at least 3 feet between footing and cofferdam.
11.3.1, 11.3.2, C11.3.2	Deleted Note E225/M225 and referred to duplicate note E480/M480.
11.3.1, 11.3.2	Deleted Notes E182 and M182 because these notes are no longer needed.
11.5.2, C11.5.2	Revised instructions for scrape test Notes E480/M480 and E481/M481.
11.5.2	Added new Note E415 for HPC-O concrete curing.
11.7.2	Revised Note E634/M634 to refer to Materials IM 452 and clarify price bid.

Article	**ASD/LFD**